

ABSTRACT

It is to provide a vapor phase growth method in which an epitaxial layer consisting of a compound semiconductor such as InAlAs, can be grown, with superior reproducibility, on a semiconductor substrate such as Fe-doped InP. In vapor phase growth method for growing an epitaxial layer on a semiconductor substrate, a resistivity of the semiconductor substrate at a room temperature is previously measured, a set temperature of the substrate is controlled depending on the resistivity at the room temperature such that a surface temperature of the substrate is a desired temperature regardless of the resistivity of the semiconductor substrate, and the epitaxial layer is grown.